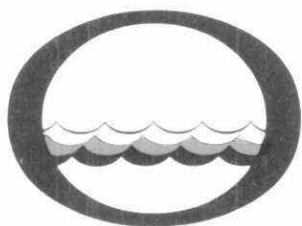


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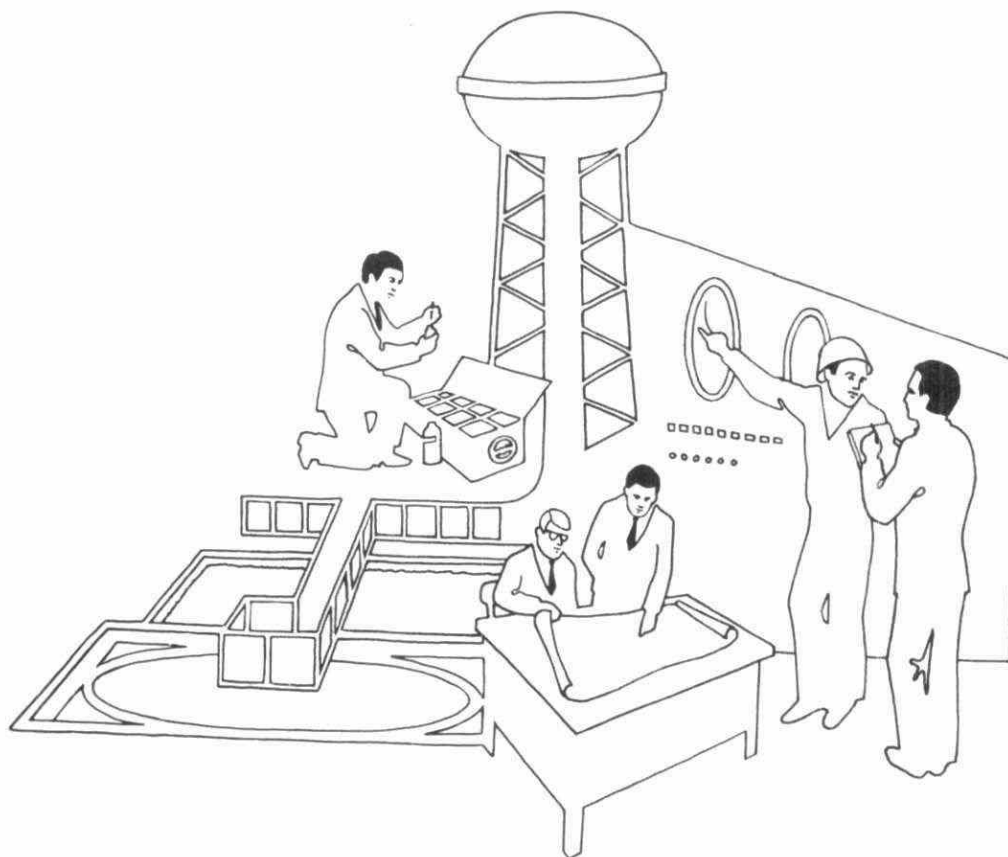
*Water management in Ontario*

STANDARDS DEVELOPMENT BRANCH-CMOE



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VILLAGE OF TARA  
(COUNTY OF



## SANITARY SURVEY

OF THE

VILLAGE OF TARA

COUNTY OF BRUCE

1971

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Report on a sanitary survey of  
the village of Tara, county of  
Bruce.

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REPORT  
ON A  
SANITARY SURVEY  
OF THE  
VILLAGE OF TARA  
COUNTY OF BRUCE

DISTRICT ENGINEERS BRANCH  
DIVISION OF SANITARY ENGINEERING  
1971

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i) INTRODUCTION

On March 1, 1971, at Council's request, OWRC staff attended the regular meeting of Council to discuss the evident need and procedures for establishing a sewage treatment facility for the Village.

In order to document the need for sewage collection and treatment facilities, the Ontario Water Resources Commission agreed to conduct a sanitary survey to determine the presence and extent of sewage discharge from the Village. This survey was carried out by staff from the OWRC Division of Sanitary Engineering on May 13, 1971 and the results are here presented.

ii) GENERAL INFORMATION

The Village of Tara is located in the Township of Arran, County of Bruce, approximately 15 miles south-west of the City of Owen Sound.

The 1970 population, as obtained from the "1971 Municipal Directory" is listed as 660 persons, increased from 603 persons noted in 1969.

United Dairy Producers Co-operative constitutes the only major industry in the Village.

Sewage disposal is accomplished mainly by the use of septic tanks, however a storm drain system does exist throughout the Village, discharging to the Sauble River.

Topography in the area is best described as undulatory. The soil varies in the area from a silty loam, to clayish and stoney loam.

A municipal water works supplies chlorinated domestic water to the Village from two drilled wells, one of which is owned by the OWRC.

The most prominent watercourse is the Sauble River which winds through Tara and is intercepted downstream by Tara Creek.

1971 TARA SANITARY SURVEY

I PROCEDURE

The survey was carried out on May 13, 1971 by OWRC staff with the assistance of Mr. A. Price, Village Foreman.

A plan of the existing storm sewer system was prepared and a total of 74 samples was collected from 42 locations distributed about the storm sewer system. Private outfalls, where visible were also sampled.

Analyses were conducted to determine the biochemical oxygen demand (1), the number of coliform (2) and faecal coliform bacteria (3) present per 100 ml of sample, the concentrations of any anionic detergents present (4) and in one case the concentration of a suspected phenol content (5).

NOTE:

1. The biochemical oxygen demand of a sample is the oxygen requirement needed to oxidize a sample microbiologically and is an indication of the organic strength of the sample.
2. Coliform organisms are used as a general indication of domestic sewage.
3. Faecal coliform organisms, (one particular group of coliform organisms,) are specific to the intestinal tract of warm blooded animals and are a definite indication of the presence of sewage.
4. Anionic detergents, used in washing operations, are also a specific indication of the presence of a domestic or industrial wastewater.
5. The presence of phenol or phenolic equivalents is generally associated with discharges containing petroleum products or with wastes from some industries.



The following map (Figure I) outlines the locations of the survey sampling points.

## II SAMPLE ANALYSES

Tabled in Appendix I are the analyses results of the samples collected during the survey.

Sampling results may be correlated to location by reference to Figure I.

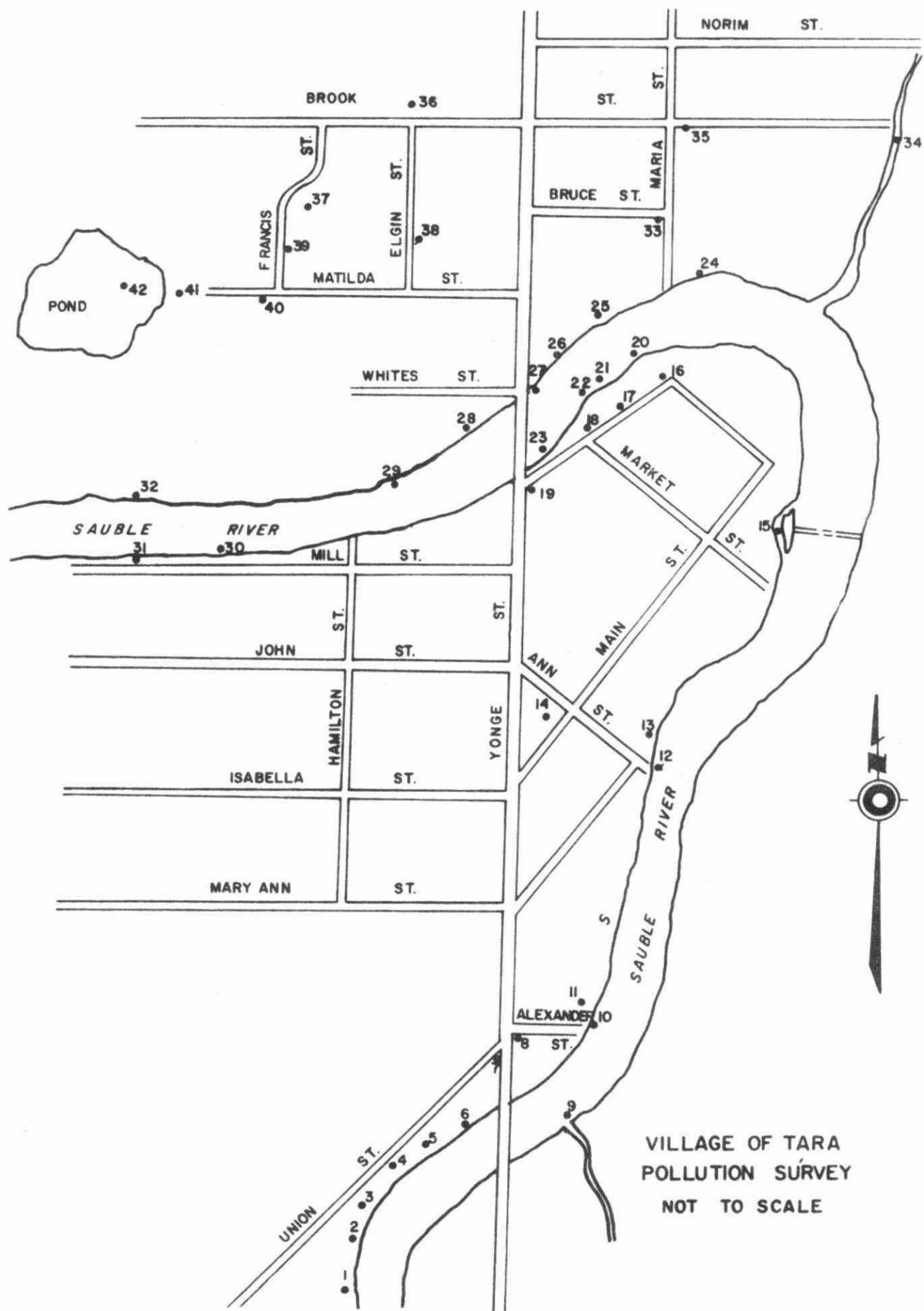
## III DISCUSSION

It is evident that untreated or partially treated domestic wastes were gaining access to the Tara storm sewer system. In addition, 11 private outfalls were observed and sampled, all indicating domestic discharge and several, (#5, 22, 36) exhibited extremely high coliform counts. It is of significance that all storm sewer samples showed evidence of domestic contamination.

Samples #3 and #4, were taken behind the UDPC plant, and were obviously cooling water combined with sanitary wastes.

The high concentration of anionic detergent noted in sample #33, correlates well with the field observation that a nearby resident had just completed her laundry washing. Domestic wastes from this operation were going directly to the storm sewers.

Sample #41 also shows evidence of the recent addition of laundry and sewage waste.



River samples, collected periodically throughout the survey (#1, 2, 6, 12, 27, 31, 32) all showed ~~fecal~~ contamination, but only #6 was at a high enough level to preclude the use of this area of the Sauble River for swimming.

The area south of the river, west of Yonge Street, was not sampled due to the sealing of storm sewer openings. Because of this lack of data no conclusions may be drawn regarding the adequacy of sewage disposal systems in this lightly developed section of the Village.

Apart from this one unknown area the survey indicates that in the Village of Tara, the present methods of sewage disposal are totally inadequate.

Domestic connections to the storm sewers for purposes of sewage disposal are evident throughout the entire Village.

Corrective measures must be taken to eliminate these sewage discharges from the storm water disposal system.

Remedial action may be undertaken either on an individual basis, by disconnecting sewer connections and building adequate sub-surface disposal systems, or by constructing communal sewage collection and treatment facilities.

The clayish nature of the soil, particularly in the downtown area affectively rules out individual septic tank improvements as a satisfactory remedial course of action.

It is therefore advisable that communal sewage collection and treatment facilities be provided in the Village of Tara to eliminate the pollutional discharges to the Sauble River.

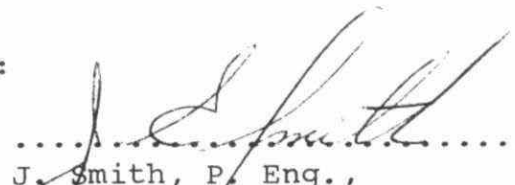
IV CONCLUSIONS

As a result of the sanitary survey conducted in the Village of Tara, it may be concluded that domestic and industrial wastes, originating from locations throughout the majority of the Village, are being discharged to the storm sewer system and to the Sauble River.

V RECOMMENDATIONS

It is recommended that the Village of Tara take immediate steps to provide communal sewage collection and treatment facilities.

Prepared by:

.....  
J. Smith, P. Eng.,  
District Engineers Branch,  
Division of Ssnitary Engineering.

APPENDIX I

VILLAGE OF TARA

1971 SANITARY SURVEY

ANALYTICAL RESULTS

SAMPLE LOCATION	BOD (ppm)	ABS (ppm)	PHENOL (ppb)	COLIFORM ORGANISMS (per 100 ml sample)	FAECAL COLIFORM (per 100 ml sample)
1) River sample up- stream of Village	1.0	0.0		130	50
2) River sample, at lot 63 Union St.	2.5	0.0		230	70
3) UDPC discharge at lot 59, Union St.	6.0	0.1		30,000	17,200
4) UDPC discharge at lot 59, Union St.	11.0	1.1		8,900,000	400,000
5) Private outfall at lot 58, Union St.	1.8	0.1		100,000	2,000,000
6) River sample at lot 56, Union St.	3.0	0.1		12,400	5,300
7) Storm sewer at Union & Yonge Sts.	19	0.8		11,000	3,000
8) Storm sewer, S. of Alexander St.	16	1.1		200,000	1,100
9) Drainage ditch E. of Yonge Street	1.8	0.1		990	340
10) Drainage area at lot 4, Alexander & Yonge Streets.	2.0	0.1		5,600	4,100
11) Private outfall at lot 2, Yonge St. N. of Alexander				3,000	1,340

SAMPLE LOCATION	BOD (ppm)	ABS (ppm)	PHENOL (ppb)	COLIFORM ORGANISMS (per 100 ml sample)	FAECAL COLIFORM (per 100 ml sample)
12) River sample at lot 14, S. of Ann Street	1.0	0.1		1,000	70
13) Storm sewer outfall on Ann St.	16	0.6		4,700	5,600
14) Storm sewer at Ann & Main St.	50	0.1		10	< 10
15) Spillway by old dam	1.2	0.1		320	40
16) Private outfall at lot 3, River Street				2,700	20
17) Private outfall at lot 4, River St.				101,000	3,100
18) Private outfall at lot 5, River St.	0.4	0.1		1,600	30
19) Storm sewer, Yonge & River St.				140,000	> 15,000
20) Private outfall #1 N. of Market St.				10	10
21) Private outfall #2 N. of Market St.				860	20
22) Private outfall S. of Market St.	40	2.4		1,480,000	1,320,000
23) Storm sewer outfall at River St. and Yonge.	18	2.7		560,000	10,000
24) Storm sewer outfall E. of Maria St.	1.4	0.1		29,000,000	9,200,000

SAMPLE LOCATION	BOD (ppm)	ABS (ppm)	PHENOL (ppb)	COLIFORM ORGANISMS (per 100 ml sample)	FAECAL COLIFORM (per 100 ml sample)
25) Storm sewer out- fall E. of Maria St.				2,600	200
26) Storm sewer out- fall E. of Yonge	46	0.9	8	13,000	14,000
27) River sample at Yonge St. bridge	1.4	0.1		600	10
28) Storm sewer W. of Yonge St. bridge	2.0	0.1		20,700	70
29) Private outfall at lot 16, E. of Yonge St. bridge.	1.4	0.0		11,800	20
30) Private outfall at lot 65, Mill St.	22	0.8		169,000	<100
31) River sample down- stream of lot 65, Mill Street	1.2	0.1		600	10
32) River sample down- stream of lot 65, Mill Street	1.2	0.1		510	<10
33) Storm sewer, Maria & Bruce Street	2,500	210		140,000	6,500,000
34) Creek sample near E. Brook Street	1.4	0.1		350	10
35) Storm sewer, Maria & Brook Street				800,000	188,000
36) Private drain, W. of Yonge & Brook St.				47,000,000	200,000
37) Storm sewer, Frances St. S. of Brook St.	1.2	0.0		2,700	1,200
38) Storm sewer, Elgin St. S. of Brook Street	6.5	0.1		320,000	7,000

SAMPLE LOCATION	BOD (ppm)	ABS (ppm)	PHENOL (ppb)	COLIFORM ORGANISMS (per 100 ml sample)	FAECAL COLIFORM (per 100 ml sample)
39) Storm sewer at lot 11, Francis Street	32	7.4		111,000	1,400
40) Storm sewer out- fall at Francis & Matilda Street	25	3.2		190,000	1,800
41) Storm ditch discharge to pond W. of Matilda St.	380	98		3,300,000	10,000
42) Pond sample, W. of Matilda St.	11	0.1		6,500	< 100

> means Greater than  
< means less than.